PATENT
Docket No. 220.00010150

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Eric T. Kool	Group Art Unit:	Unknown
Serial No.:	Unassigned	Examiner:	Unknown
Filed:	Herewith		

For: CIRCULAR DNA VECTORS FOR SYNTHESIS OF RNA AND DNA

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
ATTN: BOX PATENT APPLICATION
Washington, D.C. 20231

Dear Sir:

The present application is a continuation-in-part application of co-pending U.S. patent application Serial No. 09/569,344, filed May 11, 2000, allowed September 7, 2001, which is a continuation application of U.S. patent application Serial No. 08/805,631, filed February 26, 1997, and issued as U.S. Patent No. 6,096,880 on August 1, 2000, which is a continuation-in-part application of U.S. patent application Serial No. 08/393,439, filed February 23, 1995, and issued as U.S. Patent No. 5,714,320, which is a continuation-in-part application of U.S. patent application Serial No. 08/047,860, filed April 15, 1993, now abandoned.

Prior to taking up the above-identified application for examination, please amend the application as follows:

In the Claims

Please cancel claims 1-94. For convenience, all pending claims are provided in Appendix A.

The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if there are any questions regarding this Preliminary Amendment or if prosecution of this application may be assisted thereby.

Respectfully submitted for

Eric T. Kool

By
Mueting, Raasch & Gebhardt, P.A.
P.O. Box 581415
Minneapolis, MN 55458-1415
Phone: (612)305-1220
Facsimile: (612)305-1228
Customer Number 26813

November 30, 2001
Date

By: _____
Victoria A. Sandberg
Reg. No. 41,287
Direct Dial (612) 305-1226

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_____
Name: Gara Ladwig

APPENDIX A - SPECIFICATION/CLAIM AMENDMENTS INCLUDING NOTATIONS TO INDICATE CHANGES MADE
Serial No.: UNKNOWN
Docket No. 220.0001 0150

In the Claims

For convenience, all pending claims are shown below.

95. A method for synthesizing an RNA oligonucleotide inside a cell comprising introducing into a cell a single-stranded circular oligonucleotide template comprising at least one copy of a nucleotide sequence complementary to the sequence of the RNA oligonucleotide, such that the circular oligonucleotide is processed intracellularly to yield an RNA oligonucleotide multimer comprising multiple copies of the RNA oligonucleotide.

96. The method of claim 95 wherein the circular oligonucleotide has about 15-1500 nucleotides.

97. The method of claim 95 wherein the cell is a plant cell or an animal cell.

98. The method of claim 95 wherein the cell is a bacterial cell.

99. The method of claim 95 wherein the cell is a mammalian cell.

100. The method of claim 95 further comprising cleaving the RNA oligonucleotide multimer to yield multiple copies of the RNA oligonucleotide.

101. The method of claim 100 wherein the cleavage is autolytic.

102. The method of claim 100 wherein the RNA oligonucleotide is linear.

103. The method of claim 100 wherein the RNA oligonucleotide is circular.

104. The method of claim 100 wherein the RNA oligonucleotide is biologically active.

105. The method of claim 104 wherein the biologically active RNA oligonucleotide comprises a catalytic RNA, an antisense RNA, or a decoy RNA.

106. The method of claim 104 wherein the biologically active RNA oligonucleotide has endonuclease, exonuclease, polymerase, ligase, phosphorylase, dephosphorylase, or protease activity.

107. The method of claim 104 wherein the biologically active RNA oligonucleotide is capable of intramolecular ligation.

108. The method of claim 104 wherein the biologically active oligonucleotide comprises a ribozyme.

109. The method of claim 108 wherein the ribozyme is a hairpin, hammerhead-motif, or hepatitis delta catalytic ribozyme.

110. The method of claim 108 wherein the ribozyme is capable of *trans* cleavage.

111. The method of claim 108 wherein the ribozyme cleaves a target disease-associated RNA, DNA, or protein.

112. The method of claim 104 wherein the biologically active RNA oligonucleotide modifies the structure or the function of a target disease-associated DNA, RNA, or protein.

113. The method of claim 95 wherein a gene encoding an effective RNA polymerase operably linked to a promoter is co-introduced into the cell.

114. The method of claim 113 wherein the RNA polymerase is T7 or *E. coli* polymerase.

115. The method of claim 95 wherein the circular oligonucleotide template is introduced into the cell using direct injection, electroporation, heat shock, calcium phosphate treatment, lipid-mediated delivery, or cation-mediated delivery.

116. The method of claim 95 further comprising implanting the cell into a plant or animal after introducing the single-stranded circular oligonucleotide template into the cell.

117. The method of claim 95 performed in a cell explanted from a plant or animal.

118. The method of claim 117 further comprising implanting the cell into a plant or animal after introducing the single-stranded circular oligonucleotide template into the cell.

119. The method of claim 118 wherein the cell is reimplanted into the plant or animal from which it was explanted.

120. The method of claim 117 wherein the animal is a mammal.

121. The method of claim 95 performed in cell culture.

122. The method of claim 95 performed *in situ* in a living organism.

123. The method of claim 122 wherein the circular oligonucleotide is administered to the organism using direct injection, inhalation, intranasal administration, ocular administration, site-specific incubation or infusion.